WHAT IS CLAIMED IS:

1. A disk substrate for a perpendicular magnetic recording medium, which comprises:

a disk base member;

a soft magnetic layer formed on the disk base member; and

a protection layer formed on the soft magnetic layer.

2. A disk substrate as claimed in claim 1, wherein:

the protection layer is an amorphous layer.

3. A disk substrate as claimed in claim 1, wherein:

the protection layer is made of a non-magnetic substance.

4. A disk substrate as claimed in claim 1, wherein:

the protection layer is a carbon layer.

5. A disk substrate as claimed in claim 1, wherein:

the disk base member is made of glass.

6. A disk substrate as claimed in claim 1, wherein:

the disk base member has a principal surface provided with a texture for giving magnetic anisotropy to the soft magnetic layer.

7. A perpendicular magnetic recording disk comprising:

the disk substrate claimed in claim 1; and

at least a perpendicular magnetic recording layer formed on the disk substrate.

8. A method of manufacturing a disk substrate for a perpendicular magnetic recording medium, comprising the steps of:

depositing a soft magnetic layer on a disk base member by sputtering; and

depositing a protection layer on the soft magnetic layer by sputtering.

9. A method of manufacturing a perpendicular magnetic recording disk, comprising the steps of:

heating the disk substrate claimed in claim 1; and

depositing at least a perpendicular magnetic recording layer on the disk substrate.